

JUN 28 1993



TWIN STATE ENVIRONMENTAL CORP.

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June 21, 1993

Ms. Cindy Woods
Environmental Engineer
Sites Management Section
Vermont Agency of Natural Resources
103 South Main Street/West Office
Waterbury, VT. 05671-0404

RE: Site Investigation Report
R.L. Vallee, Inc./Bulk Plant, St. Albans, Vt
SMS Site Number 92-1195

Dear Ms. Woods:

Twin State Environmental Corporation is pleased to submit for your review, the attached Site Investigation Report which has been prepared for the above referenced site.

If you have any questions or wish to discuss the findings or recommendations presented in this document, please contact me. I can be reached at either my home office (877-2423) or at TSEC's St. Albans office (527-8144).

I look forward to speaking with you.

Very truly yours,

TWIN STATE ENVIRONMENTAL CORPORATION

Jennifer von Rohr
Project Manager

JVR/abc
c.c.: Skip Vallee, R.L. Vallee, Inc.
attach.

bulkplt2.rpt

SMS 1195

SITE INVESTIGATION REPORT
R.L. VALLEE, INC. BULK PLANT
ST. ALBANS, VERMONT
SMS SITE NO. 92-1195

JUNE 21, 1993

PREPARED FOR:

R.L. VALLEE, INC.
282 SOUTH MAIN STREET
ST. ALBANS, VT

PREPARED BY:

TWIN STATE ENVIRONMENTAL CORPORATION
P.O. Box 711
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1.0 EXECUTIVE SUMMARY

This report has been prepared to summarize the activities conducted and the findings generated in association with a subsurface evaluation conducted at the R.L. Vallee, Inc. Bulk Plant located at 280-282 Main Street in St. Albans Vermont (SMS Site No. 92-1195). This evaluation stems from the apparent release of petroleum product which was encountered during tank excavation activities conducted at this site in January 1992. It is believed that the source of the released petroleum product is from one or more underground storage tank (UST) previously in use at this location, or as a result of current/historical site activities which include bulk loading and unloading of petroleum products for distribution.

Petroleum storage facilities currently in use at this site include: one (1) 500 gallon waste oil UST; one (1) 10,000 gallon gasoline UST; one (1) 2,000 gallon gasoline UST; one (1) aboveground diesel tank; and an additional five (5) aboveground storage tanks used for bulk storage. Additionally four (4) USTs have been removed or closed in place at this location since May 1990. USTs which are known to have previously been in use at this site include two (2) gasoline tanks, one (1) diesel tank and one (1) waste oil tank. Available information which pertains to these former USTs is summarized in Section 3.0 below.

This site and the associated petroleum storage and distribution facilities are owned and operated by R.L. Vallee, Inc. of St. Albans, VT. In addition to providing bulk petroleum storage, this facility is used for a number of auxiliary functions including truck and vehicle maintenance, propane tank storage, fuel distribution for company vehicles and, the temporary storage of petroleum contaminated soil. This location is also the main office site of R.L. Vallee, Inc.

The specific activities conducted for this project were proposed by New England Industrial Maintenance, Inc. in two (2) separate work plans/cost proposals, both dated January 5, 1992. One plan addressed the concerns related to the contamination associated with the underground storage tanks, whereas the second plan addressed the stockpile of contaminated soil located on the western portion of the site. This site was addressed by two (2) separate work plans in response to the SMS's handling of the site as two (2) separate sites (i.e. one Site Manager was assigned to the UST related concerns and a different Site Manager was assigned to the soil stockpile related issues. As a result, two separate work requests were issued.). In order to evaluate this site in it's entirety however, TSEC proposes that, beginning with this report, the entire site be addressed as one.

The objectives of this project were to evaluate the subsurface conditions at the site relative to petroleum contamination, evaluate what impact, if any is posed on groundwater by the soil stockpile which exists on site, and develop appropriate options for disposal or use of the soil stockpile. Project activities were therefore designed to address groundwater quality; determine soil type and condition; define the horizontal flow direction of the overburden aquifer; evaluate the soil stockpile for current contamination levels; and, identify potential environmental receptors.

The following specific tasks were conducted for the current phase of this investigation:

- state and local records pertaining to the site and surrounding area were researched;
- site information provided by R.L. Vallee, Inc. was reviewed;
- an evaluation of the site and the monitoring wells known to be present was conducted;
- two (2) monitoring wells were installed;
- all accessible monitoring wells were sampled for data and laboratory analysis;
- the potential for migration of contamination to off-site sources was considered; and,
- each monitoring well was surveyed for location and elevation data.

This report has been prepared to summarize these activities and to present the findings generated as a result.

Note that although the majority of the current phase of field work was conducted by NEIM, this project (including this report), was completed by Twin State Environmental Corporation (TSEC). This transition was initiated due to the relocation of key personnel from NEIM to TSEC. Individuals involved with the project therefore remained consistent throughout its duration.

All project drilling was conducted by Adams Engineering of Underhill, Vermont; and Endyne, Inc. of Williston, Vermont provided laboratory services.

2.0 SITE SETTING AND LAYOUT

The subject property, which is identified on the Site Location Map provided as Figure 1, is situated on the west side of Route 7 (also known as South Main Street) in St. Albans, Vermont. The front of the property, which contains the office building is located in the City of St. Albans. The back portion of the property, however, extends beyond the City's border and is therefore located in the Town of St. Albans. It has not been conclusively determined whether the USTs associated with this property are within the boundaries of the Town or the City of St. Albans.

As illustrated on the schematic site plan provided as Figure 2, structures which currently exist at the property include the main office building and attached shop, petroleum tank farm and associated distribution facilities, and a nine (9) bay maintenance shop. The temporary soil stockpile, which consists of petroleum contaminated soil from a number of off-site sources, is situated in the rear, western portion of the site. Based on measurements of the current stockpile, it is estimated to be comprised of approximately 200 cubic yards of soil.

The general topography of the site is relatively flat with a gradual slope towards the west. No surface water has been identified within the vicinity of the site, however according to State site files, this location is within a wellhead protection area. St. Albans Bay of Lake Champlain is located approximately two (2) miles west of this site location.

Property uses surrounding the site include residential, commercial, industrial and rural properties. Bordered to the north and north west of the site is an inactive commercial lumber yard and to the west is a Central Vermont Railway right of way. Route 7 borders the site on the east side and a private residence is located to the south. Other properties within the vicinity of the site include the St. Albans Town Industrial Park located approximately 0.25 mile to the north east, a hotel on the opposite side of Route 7, and land, designated by the Town of St. Albans as rural, is located to the west. The City of St. Albans designates this area of Route 7 with a high density residential zoning classification.

3.0 SITE HISTORY

This site has apparently been used for the bulk storage of petroleum products since it was purchased by the current owners in 1974. The use of this property during the period immediately preceding this transaction is not absolutely known. It has been determined, however, that this site was previously part of a larger parcel which was operated as a farm from prior to 1871 until at least 1950. No information has been encountered to indicate this site has been used for any commercial or industrial activity other than its current use.

3.1 Previous Site Work

As a result of the tank excavations conducted at this site, several apparently limited subsurface investigations have been conducted at this location. Based on available information, the following discussions present a limited summary of the activities implemented in conjunction with each tank excavation or closure.

In May 1990 one (1) UST, identified as UST no. 4 was removed under the direction of a Petroleum Sites Management Section (now known as SMS) representative. A Tank Pull Form prepared by the PSMS representative on-site indicates that this tank, identified as a 12,000 gallon unleaded gasoline tank, was excavated due to a tank problem which had apparently been identified by a tightness test. Reportedly, during the course of the excavation, organic vapor readings detected via a photoionization detector (HnU) ranged between 75 and 100 parts per million (ppm). As a result of the conditions encountered, remedial efforts which were reportedly taken at the site include stockpiling 35 cubic yards of contaminated soil on-site and the installation of two (2) recovery wells.

Despite the PSMS's reference to the installation of these recovery wells, no documentation was provided to indicate either location. Furthermore, no visible evidence of any recovery wells has been encountered at this site. TSEC does not believe these wells were ever employed for remedial or monitoring purposes.

In January 1992, Twin State Environmental Services, Inc. (TSES) of White River Junction, Vermont was retained to conduct site assessments associated with the excavation of one (1) diesel UST and one (1) gasoline UST. Although it was later determined to be more appropriate to close the diesel UST in place, the required site assessments were conducted and submitted to the SMS. As reported in the Tank Pull Form and supplemental information, subsurface soil contamination was encountered within the vicinity of both tanks, and additionally, groundwater contamination was identified in the area of the gasoline tank.

In an attempt to identify the extent and degree of subsurface contamination, TSES excavated one (1) test pit to a depth of approximately 8 feet in the area believed to be downgradient from the apparent source of the contamination. This test pit, which is approximately located on Figure 2, apparently resulted in the encounter of groundwater, however no contamination was reported to be present at this location. Sufficient detail is not available to comment on the procedures or technology used to determine the presence or absence of contamination, however it is likely that TSES used a combination of PID readings and visual observations to make this determination.

In order to further address the potential for contamination originating from this site, TSES returned to the site and installed three (3) monitoring wells. These wells, which are identified on Figure 2 as OW-1, OW-2 and OW-3, were installed by Green Mountain Boring, Co., Inc. of Barre, Vermont during April 1992. As described in the boring logs for these wells provided in Appendix A, OW-1, OW-2 and OW-3 were drilled with the use of 4.25 inch solid augers and constructed of 2 inch diameter solid PVC riser and 0.010 inch screen. OW-1 and OW-2 were drilled to approximate depths of 6.5 feet below grade, and OW-3 was drilled to a depth of approximately 9 feet. No information is available to indicate the types or condition of soils encountered during the drilling of these monitoring wells.

It is apparent, based on existing analytical data reviewed for this report, that well numbers OW-1, OW-2 and OW-3 (previously identified by TSES as MW-1, MW-2 and MW-3 respectively) were sampled for analysis of volatile organics on April 15, 1992 by TSES. The results of these samples, (which are provided in Appendix A) indicate that acetone

was detected in all three (3) of the samples analyzed. In addition, the sample collected from OW-1 (previously MW-1) revealed 12.8 parts per billion (ppb) of methyl t-butyl ether.

Although no information was encountered to detail the procedures used by TSE to sample these wells, it is assumed that acetone was used in the process of decontaminating the sampling equipment. It is further assumed therefore, that as a result, each sample became contaminated with acetone during the sampling process.

4.0 SUMMARY OF CURRENT PROJECT ACTIVITIES

As identified in Section 1.0 above, a variety of tasks were included in this project in order to effectively evaluate the potential for the presence, migration and impact of petroleum contamination originating from this site. These tasks were conducted in response to requests by the SMS and in accordance with the project Work Plan. The implementation of the activities conducted for this project are summarized in the following sections.

4.1 Preliminary Site Evaluation

Prior to the initiation of the proposed drilling and monitoring well installations, NEIM visited the site in order to conduct a preliminary site survey, evaluate the existing monitoring wells (OW-1, OW-2 and OW-3), and to identify drilling limitations. As a result of this visit, four (4) additional monitoring wells were identified in the western portion of the site. These wells, identified as OW-4, OW-5, OW-6 and OW-7 were therefore evaluated for integrity and useability along with OW-1, OW-2 and OW-3.

This task revealed that all seven (7) of the existing wells would suffice for sampling purposes. As recommended in Section 7.0 of this report, however, several improvements should be made to improve the construction of all existing flush-mounted wells.

4.2 Soil Borings/Well Installations

Project drilling, which included the completion of two (2) soil borings/monitoring wells, was conducted on January 19, 1993. As proposed, drilling was conducted under the direction of NEIM by Adams Engineering, Inc. with the use of a hollow stem auger drill rig.

As illustrated on Figure 2, the new monitoring wells (MW-1 and MW-2) are situated in the south east portion of the site. MW-1 is located in the building's parking area, just upgradient of the gasoline contamination which was identified during the 1992 tank excavation. This well is intended to identify potential sources of contamination located upgradient from the referenced gasoline contamination. MW-2 is situated near the southern property line in a slightly downgradient location from the referenced gasoline contamination. This well will provide information pertaining to the quality and migration of groundwater. Data obtained from MW-2 will additionally compliment similar data from well numbers OW-1 and OW-2.

Throughout the drilling activities, NEIM was present to screen soils for classification and to identify evidence of petroleum contamination. Soils encountered at both locations were inspected visually and with the use of a photoionization detector (PID) calibrated to Isobutylene (a Benzene equivalent). The results of screening the soils were recorded for later interpretation, as well as used for placing the well screen. PID readings collected throughout the drilling of both monitoring wells, are provided along with the corresponding soil classifications in the well logs which can be found in Appendix B.

Based on visual observations made during the installation of MW-1 and MW-2, it is not apparent that petroleum contamination exists in the subsurface soils at these locations. This observation is supported by the relatively low to non-detectable PID readings which were collected from these locations.

As further indicated by the well logs (Appendix B), MW-1 and MW-2 are both constructed of 2 inch diameter PVC solid casing and 0.010 inch slot size well screen. The borehole surrounding each well casing was backfilled with clean filter sand to a minimum depth of six (6) inches above the screen, and grouted above the top of sand. Finally, MW-1 was fitted with a flush-mounted well guard, and MW-2 was equipped with a stick-up well guard.

All of the previously existing wells are similarly constructed of 2 inch diameter PVC. As reported on the well logs for OW-1, OW-2 and OW-3, 0.010 inch slot size screens were used for these wells. No well records however are available for OW-4, OW-5, OW-6, or OW-7, therefore, no comments can be made regarding the construction details of these wells.

4.3 Groundwater Sampling

As proposed, groundwater sampling was conducted of all accessible monitoring wells for the generation of water level data, PID readings and the collection of groundwater for laboratory analysis. Unfortunately, however due to the collection of insufficient sample volume during the implementation of this task, a second round of sampling was necessary to fulfill the analytical requirements imposed on this site. Both sampling episodes are summarized as follows.

The first round of sampling was conducted by NEIM on January 20, 1993. Sampling at each well proceeded using the following procedures and sequence:

1. Once accessed, the well cap was removed and PID readings were collected from the well's headspace and recorded.
2. The water level elevation and depth to the bottom of the well was determined and recorded.
3. The volume of standing water present in the well was determined.
4. The well purged until dry or three (3) well volumes were removed. All purge water removed from these wells was allowed to drain onto the ground surface.
5. The well was sampled using a decontaminated teflon bailer.
6. The well was closed and secured.

This sampling event included the collection of samples for purgeable aromatic analysis (EPA Method 8020) from well numbers MW-1, MW-2, OW-1, OW-3, OW-4, OW-5, OW-6 and OW-7 and one (1) equipment blank. No sample was collected from well number OW-2 during this event because this well did not recharge sufficiently following purging to allow for the collection of sampling.

NEIM returned to the site on January 25, 1993 in order to complete the site's sampling requirements and collect samples for the analysis of total hydrocarbons by EPA Method 418.1. This event also included the collection of water level data. Due to the presence of ice and snow inside the casing of well number OW-4, this well could not be sampled at this

time. Sampling during this episode was therefore limited to MW-1, MW-2, OW-1, OW-2, OW-3, OW-5, OW-6 and OW-7.

Water level elevation data generated during the January 25, 1993 sampling event is presented in Table 1. This data has been translated to demonstrate an east to west groundwater flow direction within the vicinity of the site. The groundwater flow direction is depicted on Figure 3.

As indicated by the data summary provided as Table 2, analytical results for the purgeable aromatic compounds are not provided for samples collected from well numbers OW-4, OW-5, OW-6, and OW-7. Despite the fact that these wells were sampled for this analysis during the January 20, 1993 sampling event, this data is currently not available to TSEC. (Note that at the time of this writing attempts were underway to obtain this outstanding data from NEIM, Inc. Upon receipt, this data will be submitted in addendum to this report).

The analytical results which are provided on Table 3 indicate that of the purgeable aromatic compounds tested for, including Benzene, Toluene, Ethylbenzene, Xylene (BTEX) and MTBE, only Toluene was detected. Furthermore, of the wells for which data is reported, this compound was only detected in MW-1 at a reported concentration of 13.9 ug/l.

Also summarized on Table 3, are the analytical results of the Total Hydrocarbon analysis. As indicated, five (5) of the eight (8) wells sampled for this analysis were found to contain significant (>1,000 ug/l) concentrations of total hydrocarbons. Specifically, where detected the total hydrocarbons reported ranged from a low concentration of 1,000 ug/l in the sample of OW-2 to a high concentration of 14,000 ug/l in the sample collected from OW-1. Well numbers MW-1, MW-2, OW-6 and OW-7 did not reveal concentrations which were detectable by this analysis.

Based on: the inconsistency of the total hydrocarbon data compared to the purgeable aromatic data; the lack of documentation regarding the purging and sampling methods used by the NEIM Sampler during the January 25, 1993 sample event; and the absence of QA/QC samples to represent the total hydrocarbon analyses, the total hydrocarbon data is considered by TSEC to be questionable.

A copy of the laboratory report for these samples is provided in Appendix C.

4.4 Well Survey

In order to correlate water level elevation data from each of the monitoring wells and determine the direction of groundwater flow underlying the site, each monitoring well was surveyed for location and elevation data. This data has been incorporated into the Site Plan and Groundwater Contour Map (Figures 2 and 3) prepared for this report.

4.5 Soil Stockpile Evaluation

As discussed above, approximately 200 cubic yards of petroleum contaminated soil is currently stockpiled at the R.L. Vallee, Inc. bulk plant facility. This stockpile includes petroleum contaminated soil removed from at least four (4) R.L. Vallee, Inc. owned or affiliated sites for landfarming purposes between the period of approximately 1991 to 1992. Sites which are known to have contributed to this stockpile include:

- Enosburg Mobil; 90-598
- Tudhope Harbor Store; 90-525

- R.L. Vallee, Inc. Bulk Plant Facility; and
- The Clifford Residence located in North Hero, Vermont.

In order to assess the current status of this soil stockpile and develop recommendations for its use, TSEC conducted an evaluation of the soil for contamination. This evaluation included accessing soil at approximately 18-24 inches into the pile (i.e. from the exterior of the pile inward) at random locations throughout the soil stockpile, and collecting PID readings.

The PID results generated by this evaluation revealed predominantly nondetectable readings and one reading of 3 parts per million (PPM). Based on correspondence pertaining to these soils issued by SMS representative Bob Haslam dated July 25, 1991, TSEC anticipates this soil may be suitable for on-site fill material.

5.0 INITIAL RISK EVALUATION

Based on the inconclusive analytical results generated by the activities discussed here, it appears that petroleum contamination from one (1) or more underground or aboveground source may have impacted groundwater underlying this site. Conclusions pertaining to the potential for impact on underlying groundwater, however can not be developed with certainty at this time, due to the lack of reliable and valid groundwater analytical data.

A review of available state information indicates that at least one (1) overburden drinking water well and 45 bedrock wells exist within a one (1) mile radius of this site. As proposed, the scope of work incorporated into this current evaluation did not include addressing the potential impact site contamination may pose on surrounding drinking water supplies. Actual locations of the surrounding wells have therefore not been determined at this time.

6.0 CONCLUSIONS

Based on the information generated and presented here the following conclusions have been developed with regard to the R.L. Vallee, Inc. Bulk Plant Facility:

1. Petroleum contamination has been encountered at four (4) former or current underground storage tank locations on-site. These areas have all been identified through the course of UST excavation activities which were conducted between 1990 and 1992. Contaminated areas include two (2) areas of gasoline contamination, one (1) area of waste oil contamination and one (1) area of diesel fuel contamination.
2. All known underground sources of petroleum contamination have been replaced.
3. Approximately 200 cubic yards of petroleum contaminated soil is currently landfarmed at this location. This stockpile consists of soil removed from at least four (4) R.L. Vallee, Inc. owned or affiliated sites which had been affected by a petroleum release.
4. In response to the identification of contamination during a 1990 gasoline tank excavation, two (2) recovery wells were reportedly installed by a State of Vermont representative. No documentation pertaining to the location or the use of either recovery well has been encountered. Furthermore, no visible evidence of these recovery wells remains on-site. It is not believed that either of these recovery wells have been used for monitoring or remedial purposes.

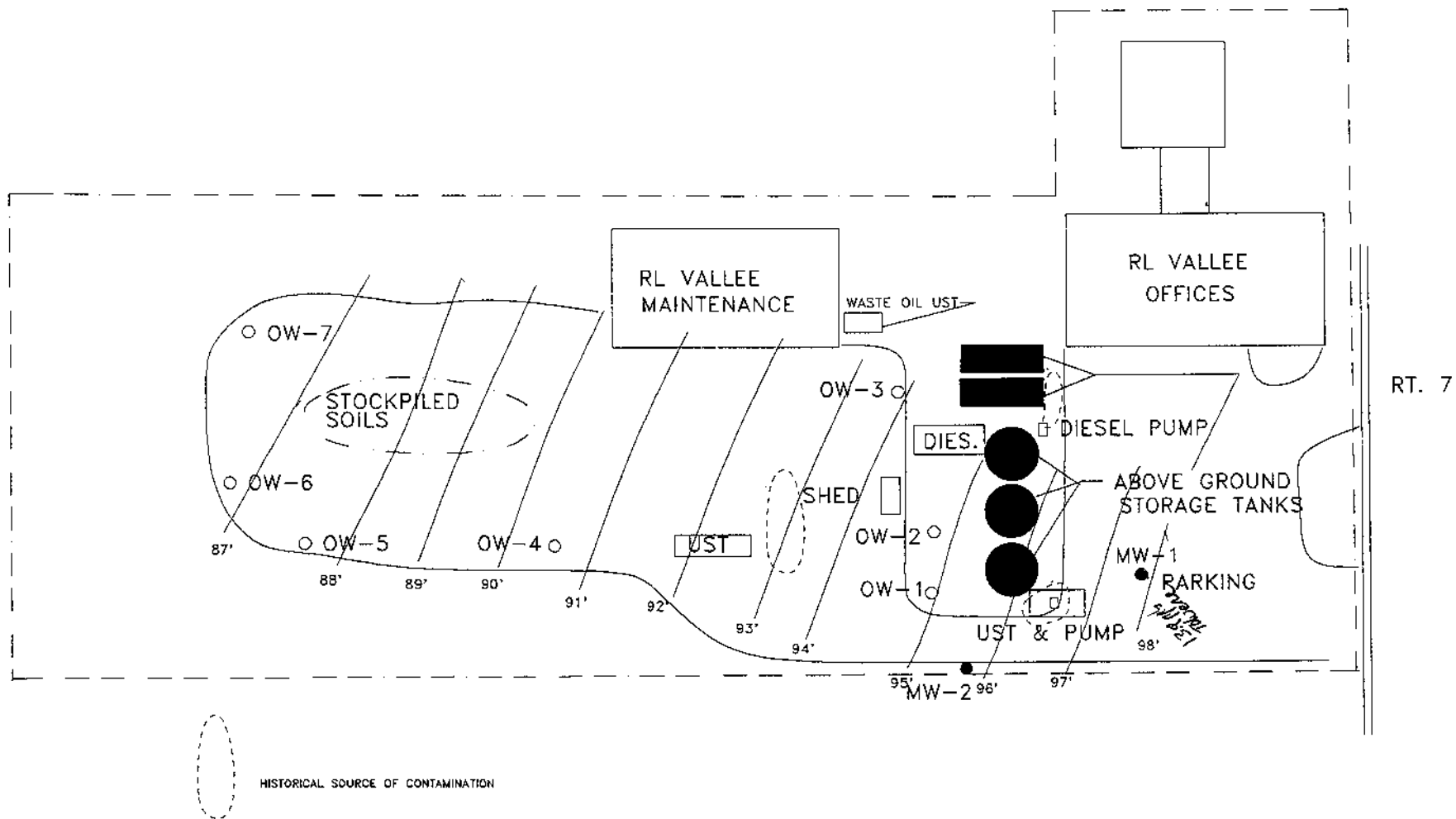
5. Monitoring wells have been installed at nine (9) locations throughout the site. Screening of soils at two (2) of the well locations revealed low to non-detectable PID readings and no visible evidence of contamination. No documentation apparently exists regarding the condition of soils encountered at the remaining seven (7) monitoring well locations.
6. The collection and interpretation of survey and water level elevation data reveals that groundwater underlying the site tends to flow in an east to west direction towards Lake Champlain.
7. Sampling and analysis of groundwater collected from the monitoring wells on-site revealed a relatively low concentration of Toluene in one (1) well located upgradient of the identified sources of contamination (13.9 ug/l toluene at MW-1). In addition, data of questionable integrity revealed total petroleum hydrocarbons ranging from 1,000 ug/l to 14,000 ug/l in four (4) out of six (6) wells sampled for this episode which are situated downgradient from a documented area of contamination.
8. No assessment has been conducted to date which addresses the potential for contamination of off-site receptors. A minimum of one (1) overburden drinking water well is however believed to exist within a one (1) mile radius of the site.

7.0 RECOMMENDATIONS

Based on the activities conducted during this phase of evaluation and the findings generated as a result, TSEC believes the following activities must be conducted at this time in order to adequately evaluate this site:

1. In order to eliminate the potential for surface water to accumulate around the top of each well and further protect these monitoring wells from damage caused by the high volume of truck and vehicle traffic, all flush mounted wells should be converted to stick-up well guards.
2. One (1) complete round of groundwater sampling should be conducted at all accessible monitoring wells. This sampling should be conducted in strict adherence to the well sampling procedures defined below.
 - a. Once accessed the well cap will be removed and PID readings will be collected from the well headspace and recorded.
 - b. The water level elevation, depth to bottom of the well and amount of free product, if any, present will be measured and recorded.
 - c. The volume of standing water present in the well will be determined.
 - d. A minimum of three (3) well volumes will be removed from the well with the use of a peristaltic pump equipped with dedicated tubing of flexible, inert material. All purge water will be allowed to drain directly to the ground surface.
 - e. Samples will be collected for the analysis of purgeable aromatics (EPA Method 8020) and total hydrocarbons (EPA Method 418.1) with the use of a decontaminated teflon bailer.
 - f. The well will be closed and secured.
 - g. The purging, decontamination and sampling procedures used at each well location will be documented as appropriate.
3. This sampling, or a modification as appropriate, should be continued at this site on a quarterly basis. The results of each sampling event along with an interpretation of the data generated should be submitted to the SMS upon receipt.

4. The stockpiled soil should be spread out on-site and seeded with an appropriate cover crop such as conservation crop. If this is not determined to be appropriate, other options for treatment/disposal of these soils should be considered.
5. An evaluation of potential receptors of contamination originating from this site should be conducted. As appropriate, this task should include the collection of samples for analysis from any surface water source located hydraulically downgradient on the site.



TWIN STATE ENVIRONMENTAL CORP.

PO BOX 711, ST ALBANS, VT. (802) 527-8144

FIGURE 2

SCALE:

DATE:
6/18/93

DRAWN BY:

TABLES

TABLE 1
SUMMARY OF MONITORING WELL ELEVATION DATA
R.L. VALLEE, INC.
BULK PLANT FACILITY, ST. ALBANS, VT.

<u>Well</u> <u>Identification</u>	<u>TOC Elevation</u> <u>(feet)</u>	<u>Measured Depth to</u> <u>Water (feet)</u>	<u>Water Level</u> <u>Elevation (feet)</u>
MW-1	104.65	6.8	97.9
MW-2	103.37	7.9	95.5
OW-1	99.54	4.9	94.6
OW-2	100.15	5.8	94.4
OW-3	98.02	3.9	94.1
OW-4	93.61	-	-
OW-6	90.50	3.9	86.6
OW-7	90.09	4.0	86.1

Notes:

- Well locations are identified on Figures 2 and 3.
- TOC - indicates top of well casing.
- All reported measurements are relative to a temporary bench mark used for the well survey.
- Well No. OW-4 was inaccessible at the time of sampling due to the presence of ice and surface water.
- All data collected by NEIM, Inc. on January 25, 1993.

TABLE 2
SUMMARY OF ANALYTICAL RESULTS
GROUNDWATER SAMPLES
R.L. VALLEE, INC.
BULK PLANT FACILITY, ST. ALBANS, VT.

Sample ID.	Results (ug/l)	
	Toluene	Total Hydrocarbons
OW-1	ND	14,000
OW-2	NS	1,000
OW-3	ND	5,300
OW-4	NA	NS
OW-5	NA	1,200
OW-6	NA	ND
OW-7	NA	ND
MW-1	13.9	ND
MW-2	ND	ND
Equip. Blank	ND	NS

Notes:

- Well locations are identified on Figures 2 and 3.
- Results are provided above only for those compounds detected in one or more samples.
- Laboratory analysis conducted by Endyne, Inc. using USEPA methods 418.1, total hydrocarbons and 8020 purgeable aromatics.
- NS - indicates identified well was not sampled during the reported sample round.
- ND - indicates compound was not detected above the method detection limit.
- NA - indicates that although the identified monitoring well was sampled for analysis, these analytical results are currently not available to TSEC. Upon receipt they will be provided in addendum to this report.

FIGURES

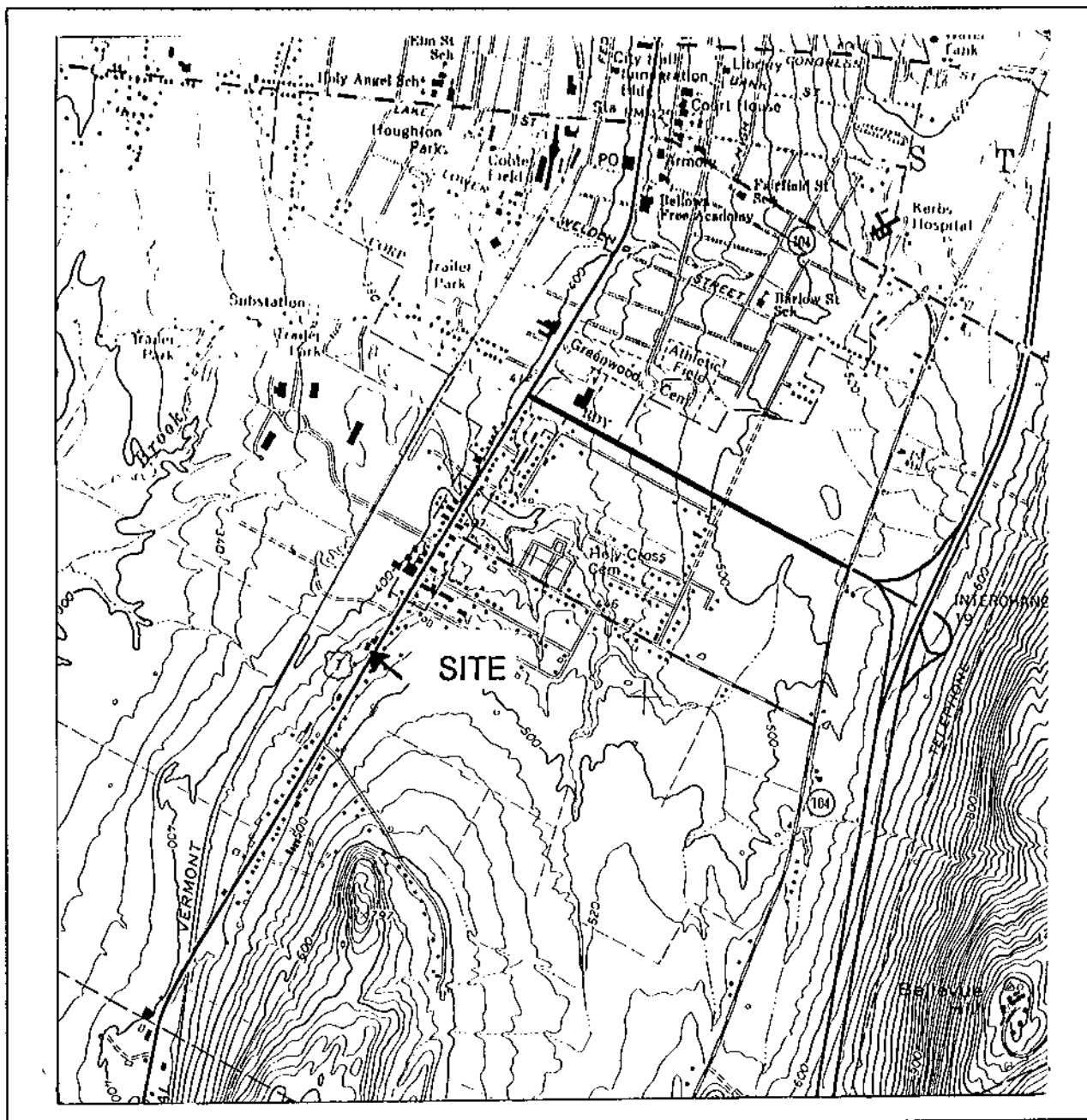


FIGURE 1

SITE LOCATION MAP
R.L. VALLEE, INC. BULK PLANT
ST. ALBANS, VERMONT

SOURCE: USGS QUAD MAP
ST. ALBANS, VERMONT

SCALE: 1:24,000

APPENDIX A
HISTORICAL WELL LOGS
AND ANALYTICAL DATA

R. D. 2 - BARRE, VERMONT 05641

SHEET 3 OF

DATE 4-2-92

HOLE NO. MW 31

LINE & STA

OFFSET: NONE

TWIN STATE ENVIRONMENTAL ADDRESS WHITE RIVER JCT, VT
PROJECT NAME R.L. VALLEE PETROLEUM LOCATION ST ALBANS, VT
REPORT SENT TO TWIN STATE ENVIRONMENTAL PROJ. NO.
SAMPLES SENT TO N/A OUR JOB NO. 92-

SAMPLES SENT TO N/A OUR JOB NO. 92-

LOCATION OF BORING: AS MAPPED

GROUND SURFACE TO 6.5' USED 4 25' AUGERS. THEN INSTALLED NEW

SUMMARY:

Earth Boring 6.5
Rock Coring
Samples 0.1

HOLE NO. MW 3

R. D. 2 - BARRE, VERMONT 05641

DATE 4-2-92

HOLE NO. MW-343

LINE & STA

OFFSET 2023

TO TWIN STATE ENVIRONMENTAL ADDRESS WHITE RIVER JET, VT
PROJECT NAME R.L. VALLEE LOCATION ST ALBANS, VT
REPORT SENT TO TWIN STATE ENVIRONMENTAL PROJ. NO.
SAMPLES SENT TO N/A OUR JOB NO. 92-

PROJ. NO.

OUR JOB NO. 92-

GROUND WATER OBSERVATIONS

CASING

SAMPLER

CORE BAR

SURFACE ELEV.

At 4 at 0 Hours

Type

AUGERS

SPLIT SPOON

DATE STARTED 4-2-92

DATE COMPL: 4-2-92

BORING FOREMAN P. MANNING

INSPECTOR

SOILS ENGR.

At at Hours

Hammer Fall

30"

LOCATION OF BORING: AS MAPPED

GROUND SURFACE TO <u>6.5</u>		USED <u>4.25"</u>		AUGERS: THEN <u>INSTALLED WELL</u>		SUMMARY:	
Scale Type		Proportions Used		140 lb. Wt. x 30" fall an 2" O. D. Sampler		Earth Boring <u>6.5</u>	
Washed & Cored W = Washed		trace 0 to 10%		Cohesionless Density		Rock Coring	
Unwashed Piston		little 10 to 20%		0-10 Loose		Samples <u>0</u>	
Unwashed A = Auger V = Vane Test		some 20 to 35%		10-30 Med. Dense		Cohesive Consistency	
Unwashed Thinwall		and 35 to 50%		30-50 Dense		0-4 Soft 30 + Hard	
				50 + Very Dense		4-8 M/Stiff	
						8-15 Stiff	
						15-30 V-Stiff	
				HOLE NO. <u>mw3</u>			

R. D. 2 - BARRE, VERMONT 05641

SHEET 1 OF
DATE 4-2-92
HOLE NO. MW 2
LINE & STA.
OFFSET NONE

GROUND WATER OBSERVATIONS			CASING	SAMPLER	CORE BAR.	SURFACE ELEV.
At	5'	at 0 Hours	Type	AUGERS	SPLIT SPOON	DATE STARTED 4-2-92
			Size I. D.	4 1/2"	1 3/8"	DATE COMPL. 4-2-92
			Hammer Wt.		140#	BORING FOREMAN P. MANNING
At		at Hours	Hammer Fall		30"	INSPECTOR
						SOILS ENGR.

LOCATION OF BORING: AS MAPPED

[illegible]

GROUND SURFACE TO G1

USED 4.25" AUGERS: THEN INSTALLED WELL

SUMMARY:

Undisturbed Cored W=Washed
Undisturbed Piston
A=Auger V=Vane Test
Undisturbed Thinwall

Proportions Used	
trace	0 to 10%
little	10 to 20%
some	20 to 35%
and	35 to 50%

140 lb. Wt. x 3
Cohesionless Density
0-10 Loose
10-30 Med. Dense
30-50 Dense
50 + Very Dense

0-4	Soft	30 + Hard
4-8	M/Stiff	
8-15	Stiff	
15-30	V-Stiff	

SUMMARY:

Earth Boring	9
Rock Coring	
Samples	0

HOLE NO. MW



AQUARIAN ANALYTICAL INC.

Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

603-783-9097

Volatile Organic Report

04-22-92, 13:41

Sample 4175

Sample Matrix = Water

Project = #90010 R.L. VALLEE BULK PL

Date Sampled = 04-15-92, 13:00

Sampler = TIM MURPHY

Date Logged In = 04-17-92, 14:04

Location = MW-1

Date of Analysis = 04-20-92

Town = OW-1

Organic Compound	Result (ppb)	Det. Lim. (ppb)	MCL
Bromodichloromethane	BD	10.0	-
Chlorodibromomethane	BD	10.0	-
Bromoform	BD	10.0	-> 100
Chloroform	BD	10.0	Tot. THM
Carbon Tetrachloride	BD	10.0	-
Dichloromethane	BD	10.0	5
1,1-dichloroethane	BD	20.0	5
1,2-dichloroethane	BD	10.0	
1,1,1-trichloroethane	BD	20.0	5
1,1,2-trichloroethane	BD	10.0	200
1,1-dichloroethylene	BD	10.0	5
Trichloroethylene	BD	10.0	7
Tetrachloroethylene	BD	10.0	5
1,2-Dichloroethylene (c)	BD	10.0	5
1,2-Dichloroethylene (t)	BD	10.0	70c
Chloroethane	BD	10.0	100t
Vinylchloride	BD	10.0	
Bromomethane	BD	10.0	2
Chloromethane	BD	50.0	
Trichlorofluoromethane	BD	50.0	
Benzene	BD	10.0	
Toluene	BD	10.0	5
Ethylbenzene	BD	10.0	1000
m&p-Xylene	BD	10.0	700
o-Xylene	BD	10.0	- 10000
Chlorobenzene	BD	10.0	Tot. (o+m+p)
1,2-dichlorobenzene	BD	10.0	100
1,3-dichlorobenzene	BD	20.0	600
1,4-dichlorobenzene	BD	20.0	
1,2,4-trichlorobenzene	BD	20.0	75
Styrene	BD	20.0	9
Acetone	BD	10.0	5
Tetrahydrofuran	518.0	500.0	
Diethylether	BD	250.0	
Methyl t-butyl ether	12.8	150.0	
Methyl isobutyl ketone	BD	20.0	
Methyl ethyl ketone	BD	250.0	
Carbon Disulfide	BD	250.0	
1,1,2-trichloro 1,2,2-trifluoroethane	BD	20.0	
	BD	10.0	

Comments:

The sample matrix was water.

Method of Analyses = EPA-624

Certified - N.H., Conn., Mass., Maine, EPA-624/524

BD = Below Detection Limit - The above analyses included compounds not listed on this page. Results are in parts per billion (ppb) unless noted.



AQUARIAN ANALYTICAL INC.

Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

603-783-9097

Volatile Organic Report

04-22-92, 13:41

Sample 4176

Sample Matrix = Water

Project = #90010 R.L. VALLEE BULK PL

Date Sampled = 04-15-92, 13:06

Sampler = TIM MURPHY

Date Logged In = 04-17-92, 14:04

Location = MW-2

Date of Analysis = 04-20-92

Town = *EW-2*

Organic Compound	Result (ppb)	Det. Lim. (ppb)	MCL
Bromodichloromethane	BD	1.0	-
Chlorodibromomethane	BD	1.0	-
Bromoform	BD	1.0	- > 100
Chloroform	BD	1.0	- Tot. THM
Carbon Tetrachloride	BD	1.0	5
Dichloromethane	BD	2.0	5
1,1-dichloroethane	BD	1.0	
1,2-dichloroethane	BD	2.0	5
1,1,1-trichloroethane	BD	1.0	200
1,1,2-trichloroethane	BD	1.0	5
1,1-dichloroethylene	BD	1.0	7
Trichloroethylene	BD	1.0	5
Tetrachloroethylene	BD	1.0	5
1,2-Dichloroethylene (c)	BD	1.0	70c
1,2-Dichloroethylene (t)	BD	1.0	100t
Chloroethane	BD	1.0	
Vinylchloride	BD	1.0	2
Bromomethane	BD	5.0	
Chloromethane	BD	5.0	
Trichlorofluoromethane	BD	1.0	
Benzene	BD	1.0	5
Toluene	BD	1.0	1000
Ethylbenzene	BD	1.0	700
m&p-Xylene	BD	1.0	- 10000
o-Xylene	BD	1.0	- Tot. (o+m+p)
Chlorobenzene	BD	1.0	100
1,2-dichlorobenzene	BD	2.0	600
1,3-dichlorobenzene	BD	2.0	
1,4-dichlorobenzene	BD	2.0	75
1,2,4-trichlorobenzene	BD	2.0	9
Styrene	BD	1.0	5
Acetone	4000.0	50.0	
Tetrahydrofuran	BD	25.0	
Diethylether	BD	15.0	
Methyl t-butyl ether	BD	2.0	
Methyl isobutyl ketone	BD	25.0	
Methyl ethyl ketone	BD	25.0	
Carbon Disulfide	BD	2.0	
1,1,2-trichloro 1,2,2-trifluoroethane	BD	1.0	

Comments:

The sample matrix was water.

Method of Analyses = EPA-624

Certified - N.H., Conn., Mass., Maine, EPA-624/524

BD = Below Detection Limit - The above analyses included compounds not listed on this page. Results are in parts per billion (ppb) unless noted.



AQUARIAN ANALYTICAL INC.

Laboratory Services

P.O. Box 186

Canterbury, N.H. 03224

603-783-9097

Volatile Organic Report

04-22-92, 13:42

Sample 4177

Sample Matrix = Water

Project = #90010 R.L. VALLEE BULK PL

Date Sampled = 04-15-92, 13:11

Sampler = TIM MURPHY

Date Logged In = 04-17-92, 14:05

Location = MW-3

Date of Analysis = 04-20-92

Town = OW-3

Organic Compound	Result (ppb)	Det. Lim. (ppb)	MCL
Bromodichloromethane	BD	10.0	-
Chlorodibromomethane	BD	10.0	-
Bromoform	BD	10.0	-> 100
Chloroform	BD	10.0	Tot. THM
Carbon Tetrachloride	BD	10.0	-
Dichloromethane	BD	20.0	5
1,1-dichloroethane	BD	10.0	5
1,2-dichloroethane	BD	20.0	5
1,1,1-trichloroethane	BD	10.0	200
1,1,2-trichloroethane	BD	10.0	5
1,1-dichloroethylene	BD	10.0	7
Trichloroethylene	BD	10.0	5
Tetrachloroethylene	BD	10.0	5
1,2-Dichloroethylene (c)	BD	10.0	70c
1,2-Dichloroethylene (t)	BD	10.0	100t
Chloroethane	BD	10.0	
Vinylchloride	BD	10.0	2
Bromomethane	BD	50.0	
Chloromethane	BD	50.0	
Trichlorofluoromethane	BD	10.0	
Benzene	BD	10.0	5
Toluene	BD	10.0	1000
Ethylbenzene	BD	10.0	700
m&p-Xylene	BD	10.0	- 10000
o-Xylene	BD	10.0	- Tot. (o+m+p)
Chlorobenzene	BD	10.0	100
1,2-dichlorobenzene	BD	20.0	600
1,3-dichlorobenzene	BD	20.0	
1,4-dichlorobenzene	BD	20.0	
1,2,4-trichlorobenzene	BD	20.0	75
Styrene	BD	10.0	9
Acetone	3820.0	500.0	5
Tetrahydrofuran	BD	250.0	
Diethylether	BD	150.0	
Methyl t-butyl ether	BD	20.0	
Methyl isobutyl ketone	BD	250.0	
Methyl ethyl ketone	BD	250.0	
Carbon Disulfide	BD	20.0	
1,1,2-trichloro 1,2,2-trifluoroethane	BD	10.0	

Comments:

The sample matrix was water.

Method of Analyses = EPA-624

Certified - N.H., Conn., Mass., Maine, EPA-624/524

BD = Below Detection Limit - The above analyses included compounds not listed on this page. Results are in parts per billion (ppb) unless noted.

APPENDIX B
CURRENT WELL LOGS

APPENDIX C
CURRENT ANALYTICAL DATA



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993

PROJECT CODE: NEIM1833
REF.#: 41,326 - 41,330

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody.

Chain of custody did not indicate sample preservation.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method.

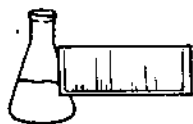
Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

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ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: February 1, 1993

PROJECT CODE: NEIM1833
REF.#: 41,326
STATION: MW-1
TIME SAMPLED: 14:00
SAMPLER: R. Swainbank

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	13.9
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 114%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: February 1, 1993

PROJECT CODE: NEIM1833
REF.#: 41,327
STATION: MW-2
TIME SAMPLED: 14:25
SAMPLER: R. Swainbank

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 102%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: February 1, 1993

PROJECT CODE: NEIM1833
REF.#: 41,328
STATION: OW-1
TIME SAMPLED: 14:35
SAMPLER: R. Swainbank

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 103%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 2

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
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FAX 879-7103

LABORATORY REPORT

EPA METHOD 8020 - PURGEABLE AROMATICS

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: February 1, 1993

PROJECT CODE: NEIM1833
REF.#: 41,329
STATION: OW-3
TIME SAMPLED: 14:50
SAMPLER: R. Swainbank

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 107%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 8020 -- PURGEABLE AROMATICS

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: February 2, 1993

PROJECT CODE: NEIM1833
REF.#: 41,330
STATION: EQ Blank
TIME SAMPLED: 14:55
SAMPLER: R. Swainbank

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	5	ND

Bromobenzene Surrogate Recovery: 107%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

EPA METHOD 8020 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: NEIM
PROJECT NAME: RL Vallee Bulk Facility
REPORT DATE: February 2, 1993
DATE SAMPLED: January 20, 1993
DATE RECEIVED: January 21, 1993
ANALYSIS DATE: February 1, 1993

PROJECT CODE: NEIM1833
REF.#: 41,329
STATION: OW-3
TIME SAMPLED: 14:50
SAMPLER: R. Swainbank

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup1(ug/L)</u>	<u>Dup2(ug/L)</u>	<u>Avg % Rec</u>
Benzene	0	10	10.4	12.6	115%
Toluene	0	10	10.2	12.3	112%
Ethylbenzene	0	10	10.3	12.3	113%
Xylenes	0	30	32	37.8	116%

CHAIN-OF-CUSTODY RECORD

00 741

9212.426

Project Name: <i>RL VALLEE, BULK FACILITY</i>	Reporting Address: <i>76 ETHAN ALLEN DR</i>	Billing Address: <i>SAME</i>
Site Location: <i>ST. ALBANS VERMONT</i>	<i>S. BURLINGTON VT</i>	
Endyne Project Number: <i>NEIM 1833</i>	Contact Name: <i>JOHN DEKO</i>	Sampler Name: <i>Randy SWANSON</i>
	Company/Phone #: <i>NEIM 863-8714</i>	Company/Phone #: <i>SAME</i>

[illegible]

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>Tonia M. Chambers</i>	Date/Time <i>1/21/93 10:25</i>
Relinquished by: Signature	Received by: Signature	Date/Time

Requested Analyses

[illegible]

LABORATORY: WHITE

PROJECT MANAGER: YELLOW

SAMPLER: PINK

**ENDYNE, INC.****Laboratory Services**

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: NEIM
PROJECT NAME: R.L. Vallee Bulk Site
DATE REPORTED: February 1, 1993
DATE SAMPLED: January 25, 1993

PROJECT CODE: NEIM1861
REF. #: 41,469 - 41,471

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody did not indicate sample preservation.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry Locker, Ph.D.
Laboratory Director

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RECEIVED

FEB - 3 1993



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

TOTAL HYDROCARBONS - EPA METHOD 418.1 (WATER)

CLIENT: NEIM
REPORT DATE: February 1, 1993
PROJECT NAME: R.L. Vallee Bulk Site
PROJECT CODE: NEIM1861
DATE SAMPLED: January 25, 1993
DATE RECEIVED: January 25, 1993
DATE ANALYZED: January 29, 1993
SAMPLER: Randy Swainback

<u>Reference #</u>	<u>Sample ID</u>	<u>Conc. (mg/L)¹</u>
41,469	OW5; 08:30	1.2
41,470	OW6; 09:10	ND ²
41,471	OW7; 09:25	ND

Notes:

- 1 Method detection limit is 0.8 ppm
- 2 None detected



~~9212.427~~

005948

SAMPLER: PINK

**ENDYNE, INC.****Laboratory Services**

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: NEIM
PROJECT NAME: R.L. Vallee Bulk Site
DATE REPORTED: February 1, 1993
DATE SAMPLED: January 25, 1993

PROJECT CODE: NEIM1862
REF. #: 41,472 - 41,476

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody record.

Chain of custody did not indicate sample preservation.

- All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Reviewed by,

Harry Locker, Ph.D.
Laboratory Director

enclosures



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

TOTAL HYDROCARBONS - EPA METHOD 418.1 (WATER)

CLIENT: NEIM
REPORT DATE: February 1, 1993
PROJECT NAME: R.L. Vallee Bulk Site
PROJECT CODE: NEIM1862
DATE SAMPLED: January 25, 1993
DATE RECEIVED: January 25, 1993
DATE ANALYZED: January 29, 1993
SAMPLER: Randy Swainback

<u>Reference #</u>	<u>Sample ID</u>	<u>Conc. (mg/L)¹</u>
41,472	OW1; 09:40	14.
41,473	OW2; 09:50	1.0
41,474	OW3; 10:00	5.3
41,475	MW1; 10:30	ND ²
41,476	MW2; 10:45	ND

Notes:

- 1 Method detection limit is 0.8 ppm
- 2 None detected

I.D. # MW-1

WELL LOG

PROJECT NAME ST ALBANS BULK PLANT

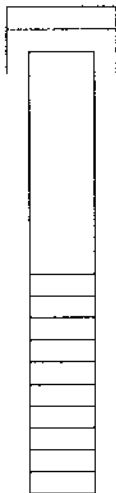
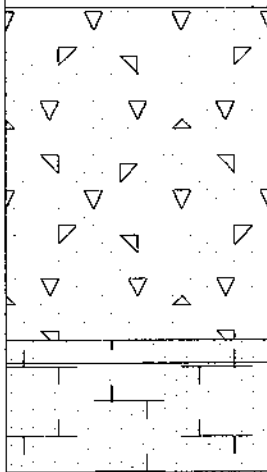
DRILLING METHOD SOLID AUGERS

LOCATION ST ALBANS VT

DRILLED BY ADAMS ENGINEERING

DATE 1/25/93

LOGGED BY NEIM INC

DEPTH IN FEET	WELL PROFILE	SOIL PROFILE	SOIL DESCRIPTION AND NOTES
0			PID=1.2 PPM REDDISH BROWN SAND AND GRAVEL FILL
5			PID= 02 PPM
10			DARK GRAY SILT WITH BROKEN SHALE PID= 0.4 PPM
15			
TWIN STATE ENVIRONMENTAL CORP PO BOX 711, ST. ALBANS VT 05478 TEL. (802) 527-8144			

I.D. # MW-2

WELL LOG

PROJECT NAME ST ALBANS BULK PLANT


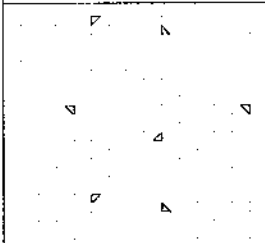
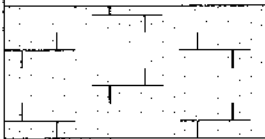
DRILLING METHOD SOLID AUGERS

LOCATION ST ALBANS VT

DRILLED BY ADAMS ENGINEERING

DATE 1/25/93

LOGGED BY NEIM INC

DEPTH IN FEET	WELL PROFILE	SOIL PROFILE	SOIL DESCRIPTION AND NOTES
0			SAND ADN GRAVEL FILL PID= ND
5			
			DARK GRAY SILT AND BROKEN SHALE PID= ND
10			
15			
			TWIN STATE ENVIRONMENTAL CORP PO BOX 711, ST. ALBANS VT 05478 TEL. (802) 527-8144